

Appl. No. 09/831,503
Reply to Office Action of May 4, 2007
Attorney Docket No. 24320

REMARKS/ARGUMENTS

Claims 1, 3 – 4 and 6 –11, and 19-21 are pending in this application, wherein claims 12-18 are withdrawn from consideration. The Specification has been amended to correct a translation error and typographical errors. No new matter is added.

In view of the above amendment and following remarks, reconsideration of the application is respectfully requested.

Matters of Form

In addition to correcting typographical errors, Applicants have amended the Specification to address a translation error. Specifically, the word “density” was mistranslated to the word “volume.” Support for the word density is found in the original German Specification, where the word “Raumgewicht” is used, which when translated to English is “density.” Accordingly, no new matter is added.

The Office Action rejects claims 1, 3, 4, 6-11, and 19-21 under 35 U.S.C. §112, second paragraph as indefinite. Applicants have amended the claims to obviate this rejection. Accordingly, Applicants respectfully request the withdrawal of this rejection.

Patentable Subject Matter

The Office Action rejects claims 1, 3, 4, 8, 9, 19 and 21 under 35 U.S.C. §103(b) over Romesberg et al. (U.S. Patent No. 5,582,906) and Thompson (U.S. Patent No. 5,841,081). This rejection is respectfully traversed.

To establish a *prima facie* case of obviousness, the Examiner must establish: (1) some suggestion or motivation to modify the references exists; (2) a reasonable expectation of success; and (3) the prior art references teach or suggest all of the claim limitations. *Amgen, Inc. v. Chugai*

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Pharm. Co., 18 USPQ2d 1016, 1023 (Fed. Cir. 1991); *In re Fine*, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988); *In re Wilson*, 165 USPQ 494, 496 (CCPA 1970).

Applicants independent claim 1 recites: a lining for a vehicle roof (2) with: an air-permeable support layer (3), an air-permeable first reinforcement layer (4) on a vehicle roof side of said support layer, and an air-permeable second reinforcement layer (5) on a passenger compartment side of said support layer, an air-impermeable back layer (9) on a vehicle roof side of said first reinforcement layer, an air-permeable decorative layer (6) on a passenger compartment side of said second reinforcement layer, and the back, first reinforcement, support, second reinforcement, and decorative layers being bonded to each other with an air-permeable adhesive (7), and further comprising a semi-permeable, micro-porous and migration-resistant acoustic barrier layer (8) provided between the second reinforcement layer (5) and the decorative layer (6) to make an acoustically optimisable and aesthetically-resistant vehicle rooflining, wherein the layers on the passenger compartment side of said support layer have an air flow resistance of $500 \text{ Nsm}^{-3} < R_1 < 2500 \text{ Nsm}^{-3}$, and wherein the barrier layer (8) comprises a mixed fibre fabric weighing approximately 20 g/m^2 to 60 g/m^2 .

Romesberg discloses a headliner for mounting in a passenger compartment of a vehicle that is formed by “rolling” a plurality of layers together. The “first” layer is composed of a non-porous film 24 that is positioned over a foam sheet 11. (emphasis added) The non-porous film 24 prevents bleed through of the liquid adhesive resin 14 in foam layer 11 onto calender rollers 42, 44 further downstream. It further minimizes bleed through of that adhesive onto molds 54, 56 in a later manufacturing step and makes the final product essentially air impermeable. (emphasis added) See col. 4, lines 19-24. Liquid theromosetting resin 15 is applied to the foam layer 11 and is sandwiched between a pair of fiber glass layers which are bonded to the foam layer. See col. 4, lines 38-42.

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Accordingly, the resulting product is a layer about 0.2 mm thick and composed of a “cured” fiber glass. Another layer of fiber glass is then layered on the first fiber glass layer to form a laminate. See col. 4, line 65 to col. 5, line 1.

Another layer 46 (web) is applied, either having a non-porous or porous configuration that, when porous, creates the problem where bleeding of resin 15 from the foam sheet 11 onto the calendar 42 or mold 54 may occur. This porous web 46’s problem is mitigated by the use of protective film or barrier layer 47 between the web 46 and roller 42. Any resin bleeding through web 46 is collected on the surface of the barrier layer or film 47 and is later discarded. (emphasis added)

See col. 5, lines 34-43.

Based on the above disclosure, Romesburg’s headliner is made from several layers, the most basic layer being a foam sheet having resin cured fiberglass layers. As one of ordinary skill may know, resin cured fiber glass is a non-porous, impermeable material, most often used in the boating industry for boat hulls. Additionally, the film 24 is explicitly stated as being impermeable. Any “barrier layer” 47 that is put into place is used to prevent resin bleed through during manufacturing, and after manufacturing is discarded. Thus, the barrier layer 47 is not a part of the finished product – the headliner.

Therefore, despite the “other” layers formed, at least one layer in Romesburg’s finished product is impermeable and there is no barrier layer.

In view of the above, it is respectfully submitted that Romesburg does not disclose or suggest all of Applicants’ claimed features. Further, Applicants respectfully submit that Thompson does not cure this deficiency in Romesburg.

Thompson discloses an acoustical insulation 10 that includes organic microfibers 12 and heat activatable staple fibers 14. See col. 2, line 67 to col. 3, line 3. The use of the insulation 10 is primarily for speaker cabinets, or in the context of automotive doors 78 containing a speaker. The method of fabrication is by “blowing” the heat activatable fibers onto the acoustical insulation web using a batt 107 that is flexibly fed through rollers 109, 106 and 105. See Fig. 7 and col. 9, lines 18-55.

The only mention of permeable of impermeable materials is in the context of an impermeable liquid adhesive. See col. 4, lines 23-24. Moreover, there is no language or suggestion regarding a barrier layer. Accordingly, Thompson is silent regarding the features lacking in Romesburg.

Therefore, Romesburg and Thompson, individually or in combination, do not disclose all the features of Applicants’ claims.

Claims 3, 4, 8, 9, 19 and 21 depend from claim 1. Thus, for at least the above reasons, Applicants respectfully request the withdrawal of this rejection.

The Office Action rejected claims 1, 4, 6-10 and 20 under 35 U.S.C. §103(a) over to Rozek et al. (U.S. Patent No. 6,204,209), Sandoe et al. (U.S. Patent Application Publication No. 2001/0036788) and Thompson. This rejection is respectfully traversed.

Rozek discloses a laminated 10 headliner structure having a porous fibrous layer 12 and a porous rigid foam layer 14. The layers are thermoformed in a mold and to generate sound absorbing characteristics. One of the layers is a fibrous porous reinforcing mat 16, 18, and 20. As clearly stated in col. 4, lines 40-45, the reinforcing mats 16, 18, 20 have a porosity that allows blown air to be felt on the other side of the mat. That is, the air porosity is at least 60%.

A cured resin serves as the adhesive to bond the decorative cover sheet 22 onto the reinforcing layer 20 in the final product. See col. 6, lines 8-9. A release layer 24 is adhesively secured to fibrous reinforcing mat 16, which prevents sticking of the laminate 10 to the thermoforming molding tool surface during the thermoforming operation. The release layer 24 is on the "top side" of the product and therefore its porosity is not critical, as sound can still be absorbed through the exposed porous surface of the cover 22. See especially Fig. 2 and col. 6, lines 17-25. Accordingly, any release layer 24 or "barrier layer" is not on the decorative side of the lining.

It is clear that Rozek does not disclose all the elements recited in Applicants' independent claim 1. Sandoe does not cure this deficiency.

Sandoe discloses a laminate headliner having a core layer 12 sandwiched between two stiffening layers 14, 16. Web adhesive 20, 22 is disposed between each stiffening layer 14, 16 and the core layer 12 to enhance the bond therebetween. See para. [0026]. There is no discussion Sandoe, regarding a barrier layer or the features lacking in Rozek. Therefore, Rozek, Sandoe, and Thompson (discussed above), individually or in combination, do not disclose or suggest all the features recited in Applicants' independent claim 1.

Claims 4, 6-10 and 20 depend from claim 1. Thus, for at least the above reasons, Applicants respectfully request the withdrawal of this rejection.

The Office Action rejected claim 11 under 35 U.S.C. §103(a) over the Romesberg, Thompson and Blum et al. (U.S. Patent No. 4,581,432). This rejection is respectfully traversed.

Blum discloses a heat-curable compound composed of a myriad of polymers and chemicals. The only relevant disclosure that the Applicants' can glean is that Blum mentions multiple uses of his compound, such as for arm rests, head rests, safety cushioning in automobile and aircraft

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passenger compartments, as well as on motorcycle can bicycle seats, seat cushions, cover layers in foam laminates, or shoe soles. See col. 16, lines 33-43. However, absent in Blum's disclosure is any mention of a barrier layer or any feature that is lacking in Romesberg and Thompson, as discussed above. Therefore, Blum does not supply the subject matter lacking in the base references. Accordingly, Romesberg, Thompson, and Blum, individually or in combination, do not disclose or suggest all the features of Applicants' independent claim 1.

Claim 11 depends from claim 1. Thus, for at least the above reasons, Applicants respectfully request the withdrawal of this rejection.

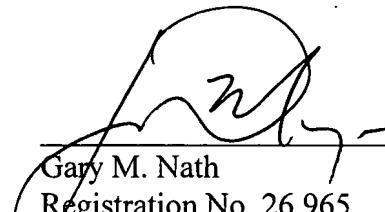
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CONCLUSION

In light of the foregoing, Applicants submit that the application is now in condition for allowance. If the Examiner believes the application is not in condition for allowance, Applicants respectfully request that the Examiner contact the undersigned attorney if it is believed that such contact will expedite the prosecution of the application.

Respectfully submitted,

NATH LAW GROUP PLLC



Gary M. Nath
Registration No. 26,965
Jerald L. Meyer
Registration No. 41,194
Jonathan A. Kidney
Registration No. 46,195
Customer No. 20529

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THE NATH LAW GROUP PLLC
112 South West Street
Alexandria, VA 22314-2891
Tel: 703-548-6284
Fax: 703-683-8396